

NOTE ON THE EPIPHRAGM OF *ACHATINA IMMACULATA*, LAM.

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ALTHOUGH mention has been made by Fischer<sup>1</sup> and others that the epiphragm in the genus *Achatina* has a slit, instead of a round perforation, as in *Helix*, during the first stage of formation, no description of the peculiar ridge which is present on the inner side

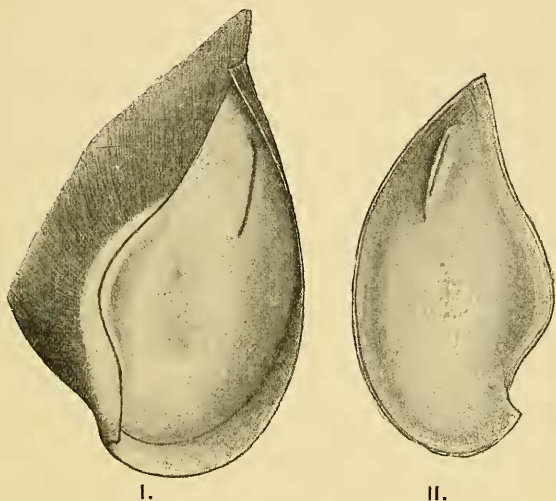


FIG. I. Aperture of *Achatina immaculata*, Lam., showing the epiphragm *in situ*.  
 ,, II. Inner view of the epiphragm when removed from the shell.

appears to have been given. It may therefore be of interest to describe this structure as met with in *A. immaculata*, Lam., from Nyasaland.

The form of the epiphragm is, of course, practically that of the aperture of the shell, although it withdraws a little way back from the extreme edge at the lower, or anterior, end. This is necessary in order to allow a notch or sinus on the inner edge to fit under the columella. The smooth surface is not quite level, this unevenness resulting from the margin being modelled to the shell at varying

<sup>1</sup> Journ. de Conch., 1853, pp. 397-403.

distances from the edge of the aperture. As appears to be invariably the case in the genus, it is pure white and porcellanous, and the inner surface is coated with a mucous film which has quite a white pearly lustre. The slit is situated at the upper, or posterior, end, and looks exactly as if a knife had been thrust through from the outside so as to force the substance out into a ridge, which is slit down the middle, on the under surface. This slit is all but closed<sup>1</sup> in both of the specimens examined. Such a solid structure as this would largely help to prevent evaporation during periods of great heat and dryness, thus retaining within the shell the moisture so necessary for the life of the inhabitant. It would equally serve as a defensive barrier against insects and other enemies during these seasons of torpidity.

The use of the slit during æstivation, when life is almost suspended, is doubtless for the purpose of conveying air for respiration, although the breathing orifice is probably all but closed at such times. An examination of a retracted animal reveals a slit-like opening in the mantle leading to the respiratory orifice which would receive the perforated ridge on the epiphragm.

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<sup>1</sup> The epiphragm of *Helix pomatia* and of *H. aperta* does not appear to be perforated.

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